RAJYA SABHA

Thursday, *the* 25th *July,* 1985/ 3 *Sravana,* 1907 *(Saka)*

The House met at eleven of the dock, Mr. Chairman in the Chair.

ORAL ANSWERS TO QUESTIONS

Wldency of the Kalpakkam Atomic Power Plant

•41. SHRI M. S RAMACHAND-BAN: Will the PRIME MINISTER be pleased to state:

(a) the ra^e of efficiency achieved in power generation by the Kalpakkam Atomic Power Plant;

(b) the number of break-downs during the years 1983 and 19184, year-wine; and

(c) the gteps, taken so far to reduce the break-downs?

THE MINISTER OF STATE IN THE NffNISTRY OF SCIENCE AND T3INOLOGY AND IN THE DE-ARTMENTS OF ATOMIC ENERGY, -*PACE, ELECTRONICS AND OCEAN DEVELOPMENT (SHRI SHIVRAJ V. PATIL); (a) Against a target of 1150 million units, Unit-I of the Madras Atomic Power Station generated about 1233 million units during 1984, with a capacity factor »f 'J4.3 per cent and availability factor of 75.3 per cent. The unit has been working very efficiently from March, 85, after the maintenance outage and specially during the month of June, 1985 when the capacity factor was 95 per cent, and$_4$ availability factor 100 per cent.

(b) The unit commenced commercial operation on 27.1.84 and there *r«r« 24 outages during 1914.

(c) The outages were primarily oa account of conventional factor© such as vibrations in the turbine, boiler feed pump etc. Preventive measures are being taken on a continuing basis.

SHRI M. S. RAMACHANDRAN: Sir, Tamil Nadu is one of the worst affected States and after the Kalpakkam plant the Government proposed that the power generated in Kalpakkam will be allotted not only to Tamil Nadu but also to other States. Then, at the repeated requests of the people and the Government of Tamil Nadu, the Central Government agreed that the power generated in Kalpakkam will be given to the State of Tamil Nadu. The people of Tamil Nadu were happy to hear this. But what Tamil Nadu wanted to gain has-been lost by the frequent interrup-tiong and lower rate of efficiency. Apart from the reason given by the hon Minister, one more reason for the frequent interruption is jellyfish blocking the water flow. I would like to know from the hon. Minister whether any action has been taken to plug thi$_3$ factor and to see that the rate of efficiency which is now temporarily attained will continue to be maintained.

MR. CHAIRMAN: The question if whether Jelly-fish is obstructing the power generation and if so, what steps are being taken,

SHRI SHIVRAJ V. PATIL: Sir, Jelly-fish did cause some difficulties. We have a tunnel constructed in the ocean through which water is taken to the plant for cooling purposes. And the Jelly-fish enter the tunnel and obstruct the flow of water to the plant. And it did cause some difficulties. The matter has been looked into and steps are being taken to see that this kind of (thing does not occur again.

Sir, out of 24 outages, only If outages have been because of the

mal-functioning of the plant. Four outages have been because of the externa] factors which are not within the control of these who are running) Khe plant. And these outages compared to the outages in the thermal plants are negligible. And these outages do not mean that the plant was out of use for a long time. At femes, the outages were even for a period of half an hour also. This has happened in the first year. From the figures which I have given, it is Tery clear that in the month of June, 4985, after the repairs have been *Hone,* the plant has worked with 10O per cent availability factor and 9* per cent capacity factor.

SHRI SURESH KALMADI: Sir, the Minister in his written reply has mis>-fcd the House. On the one hand he <rys that the unit was working very efficiently from March, 1985, and, on file other hand, he himself admits that Uhere was a jelly fish invasion. I Would like to tell him that this jelly fish first invasion was in April, 1985, whereas in his reply he says that the unit was working very efficiently dfrom March, 1985, It may be on ac-<S)unt of an oversight on the part of your officials but this fishy business is a very serioug matter because this & not for the first time that this has happened, This thing had happened a year back also and the plant had stop-efl functioning for more than 10 days. There is an investment of RB. 200 <Sores in this plant. 1 would like to know who ig responsible for it. I believe that the scientists were out With a fishing net to stop the fish. This is not such a light matter. I want to know who is responsible for this negligence. In your reply you have seated that outage ig due to the conventional factors, such as vibration of the turbine Sir, the vibration of the turbine is not a conventional factor. This is a very very serious matter. Tnis nas oeen pom-ted out to you by the General Electric Company of U.K. also who hav* asked you to reduce the vibration.

" MR. CHAIRMAN: Two minute* are already over.

SHRI SURESH KALMADI-. They have suggested certain modification* in respect of the vibrationg that have been taking place for the last two years. But the Government have not taken steps to reduce *the* vibration.

SHRI M. S. RAMACHANDRAN: Sir, from the press news I learn tha* certain proposals were made by th* local officials to overcome the- difficulty of vibration as also the jellyfish blocking the tunnel. I would like to know from the hon. Minister whether those proposals have been considered and cleared, and, if not, how long it will take the Government to clear them.

SHRI SHIVRAJ V. PATIL,. Sir, as far as the vibration in the turbine is concerned, turbine and the boilers are the conventional equipments. As far as the sophisticated equipments are concerned, there has been no difficulty and we have taken steps to see that the conventional equipments also do not suffer from any defects and there ia no difficulty. As far as the jelly fish are concerned, there have been certain kinds Of proposals given. One ia to have some sort of bubbles coming all the time from the sea surface at the terminal of the tunnel. We are looking iato it and into the cost-effectiveness of this proposal and we have also taken some steps to see that some sort of a wire-gauge is placed BO that the jelly-flsh does not enter the tun-nel. But the jelly-fish were BO powerful and they were coming in such big numbers that they broke fee w&»

Sauge a»d went through it. We are going to have some sort of a strong mesh placed over There and we have already taken steps in that direction and there wil not be any difficulty. As far as jelly-fish is concerned, it is something beyond our control ar^ we 'are not responsible for jellyfish in the ocean. As far as the vibration in the turbine and the boiler is concerned. I have already said that the boilc and the turbine are the conventional equipments which are used in the thermal po-wef stations also. We already know that sometimes there is vibration and some such things do happen" and we have already taken stepg in that direction, and we shall see that these defects are overcome.

DR. LOKESH CHANDRA: Mr. Minister, you have pointed out that «rces3fve vibration are a normal factor in the functioning of a nuclear power plant and yet the Government took special pains to invite the General Electric Company of the U. K. to look into the problem. It means that it was. quite .serious so much so that foreign experts had to be called in. Will the Government kindly point out whether the modifications suggested by the General Electric of U. K, will be implemented so that the vibrations do not hinder the operation of the plant? Secondly, Sir, the jellyfish have invaded the plant twice and it is really a sorry state of affairs that we cannot provide a meshing k> keep them out Will the Governmnt appoint a Zoologist to study the influx pattern of jelly-fish to prevent any damage to the functioning of the plant in the future.

SHRI SHIVRAJ V PATIL: I said that boilers and turbine$_e$ are conventional equipments used in thermal power plants also and that a set kind of difficulties occur and steps have been taken. As far se accepting the advice given by some foreign company is concerned, BHEL supplied *to* equipments to us and they are consulting them and it is fo$_f$ them to a£# what is to be done. As far as jellyfish is concerned, it ia in the ocean and when they come, they come *m* very large number; they are very huge creatures also. The situation; over there wag such that we could not have open tunnel for taking water inside because the sand collects there. So we wanted to have something close tunnel and not opefe tunnel. Now, sometime the jellyfisk ig entering the tunnel causing obst-truction. Some suggestions havte. been made but these suggestions arte very costly. It is to be seen whethe* anything could be done so that th> fish do not...

HOMWMEMBER: Zoologists?

SHRI SHIVRAJ V. PATIL: As far ap zoologist is concerned, when tlft? jelly-fish problem occurs in the ocea% we do have information because H fe a periodical feature and we hav% only to see that they do not enter the tunnel.

MR. CHAIRMAN: Ar$_e$ they edible?

SHRI R. RAMAKRISHNAN; *ht* fairness, I think we 'should congratulate the scientists at KalpakkaiB and the Government that in spite o? the jellyfish and vibration problem!*, iby and large* the unit hag been working satisfactorily. We are also thankful to the Prime Minister and tha Government of India that some solution has been found for sharing th» power of the second unit *on* 50 per cent basis to Tamil Nadu and 50 per cent for other States, i would like to know when the third unit is going[1] to be commissioned and what will !» the basis on which power from thi* unit will b$_e$ shared.

SHRI SHIVRAJ V. PATIL. It will be premature for me to say anything about the third unit. I can speak about the second unit which is likely % become critical within one and a half months' time which will start producing electricity and electricity will b_e fed into the grid within 2 «r S months* time. As far as the third unit is concerned, no decision has yet been taken.

SHRI M. M. JACOB: We are proud of the fact tliat Kalpakkam plant is completely indigenous where indigenous technology has been used. But the great advances made by our scientists in making nuclear power generation with complete indigene-ou_3 technology has not been given adequate publicity. India has become almost self-reliant in designing and manufacturing nuclear power gene-• ration equipment including heavy water. Under these circumstances my question *is,* is it not necessary to give adequate publicity to our achievements because even China i_s lagging behind in this particular field and they have not reached our stage; they arc depending on some other countries. So T v cu!d request the Minister to find out whether publicity could be given to it.

MR CHAIRMAN. Question not relevant .

SHRI M. KADHARSHA: The prob-is 'not only with A.iV;ja>.i-iim; it is the same with ether two power ilant3 also. Even though Atomic Energy Gomtn'ssion was constituted in 1943, we have been able to build 1 only 3 power pl&nts in course of four decades. One unit or another In each power plant i.-. shut down .due to some technical snag or vibration or other defects. Tarapore power plant resumed power generation only from the 21st of this month> Similarly, Rajasthan Atomic Energy Power Want waa dosed for more than 3 years due to leakage j» aad shield and we could not get it repaired even after three years. I would like to know from the hon. Prime Minister whether India is short of atomic power technology and whether gkilled personnel from Kalpakkam hare left iihe country for Gulf nations to seek fortunes, and is it the brain-drain which is also the reaso» for deterioration of power plants? If that ig so, what is the Government going to do about it?

SHRI SHIVRAJ V. PATIL: Atomic technology is the most advanced and the most sophisticated technology To start with, it was net available in country. We relied upon technology which was imported from outside and established the Tarapur atomic power plant. Now, ag far as the Rajasthan plant is concerned....

MR. CHAIRMAN; You do not haw to answer all that. They are only preliminaries. You answer only about Kalpakkam.

SHRI SHIVRAJ V. FATTL. My answer $is_{\#}$ the technology i_B complicated We have developed an expertise now to the extent that the Kalpakkam power plant has been established with our own technology. More than ninety per cent of the technology in the Kalpakkam plant is indigenous. True, some people have left the Kalpakkam plant and have gone abroad. But their number ig very vejy small. It does not affect our capacity. A9 I said, the technology is very complicated and because of this, we do encounter certain difficulties but we do have the capacity to overcome them. In other power plants also, other kinds ofi power plants, difficulties are encountered and when we compare the performance of the atomic power plants, nuclear power plants, 1 think we hav_f every reason to feel happy with the development of the technology whfch

has taken place and with the capacity of our scientists.

DR . (SHRIMATI) SAROJINI MAHISHI; Sir Kalpakkam being the only plant having no foreign technical collaboration, may I know the cost of production per unit Of atomic energy produced in Kalpakkam? How doe$_s$ it compare with that produced in Tarapur and that produced in Rana Pratap Sagar and how do these rates compare with international cost of production per unit of atomic energy?

SHRI SHIVRAJ V. PATIL: Now, as far as the Madras Atomic Power Station is concerned, we are charging 41 paise per unit. As far as the Tarapur atomic power plant is concerned we are charging 34.89 paise and Rajasthan, we are charging about 34 paiae.

MR, CHAIRMAN; What is the ec*t * of generation?

SHRI SHIVRAJ V. PATIL: These costs are in proportion to the coste which we have incurred in establishing them. As far as my information goes, it ie between 50 and 00 paise,

MR. CHAIRMAN: Next question.

DR, (SHRIMATI) SAROJINI MAHISHI: He has not answered' the question as to how does it compare with international costs.

Sri Lanka-Tamil Meet in Thimpu

•42. DR. H. P. SHARMA
SHRIMATI MAIMOONA SULTAN:

Will the PRIME MINISTER be pleased to state:

« (a) whether at the initiative of the Government of India, talks irere held between the Government of Sri Lanka and the Tamil Groups in Sri Lanka in Thimpu in the second week of July, 1985, to resolve the ethnic problem of Sri Lankan Tamils; and

(b) if so, what is the outcome of th$_e$ talks?

THE MINISTER OF STATE IK THE MINISTRY OF EXTERNAL AFFAIRS (SHRI KHURSIIID ALAM KHAN): (a) With the co-♦ operation and assistance of the Royal Government of Bhutan and the Government of India arrangements were made for talks to be held in Thimpu between the Sri Lanka Government on the one hand and the TULF and representatives of Tamil militant organization on the other. The talks were arranged in keeping with India's policy of providing its good offices to Sri Lanka to facilitate a political solution to its ethnic problem.

(b) It is understood that the talks were exploratory in nature. It has been announced that talks between the two sides will be resumed on August, 12.

DR. H. P. SHARMA: Sir, the Thimpu initiative of the Prime Minister, wherein the representatives of the Government of Sri Lanka and the various representatives of the Lankan Tamils were brought together to the negotiating table, has been acclaimed as one of the most imaginative and this—one hopefully thinks—might turn out to be one of the most fruitful initiatives of the Prime Minister.

fThe question was actually asked on the floor of the House by Shri H. P. Sbarma.